ASPICE PAM **4.0**

.. all changes in one view

Part III:

MAN.3

ACQ.4

SUP.1, SUP.9 – SUP.10

MAN.3
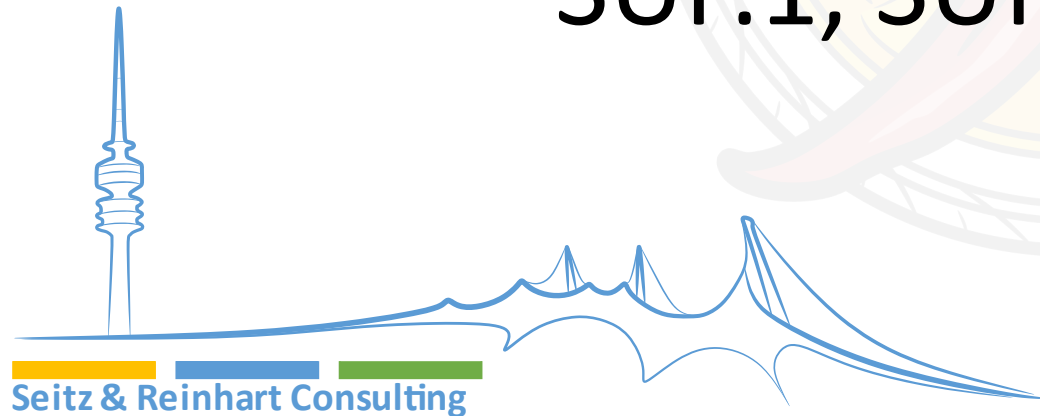
ASPICE PAM 3.1
Outcomes

1) the scope of the work for the project is defined; (BP.1)
2) the feasibility of achieving the goals of the project with available resources and constraints is evaluated; (BP.2, BP.3, BP.5)
3) the activities and resources necessary to complete the work are sized and estimated; (BP.4, BP.5, BP.6, BP.8, BP.9)
4) interfaces within the project, and with other projects and organizational units, are identified and monitored; (BP.7, BP.9)
5) plans for the execution of the project are developed, implemented and maintained; (BP.4, BP.8, BP.9)
6) progress of the project is monitored and reported; (BP.10)
7) corrective action is taken when project goals are not achieved, and recurrence of problems identified in the project is prevented; (BP.4, BP.5, BP.6, BP.7, BP.8, BP.9, BP.10)

ASPICE PAM 4.0
Outcomes

1 1) The scope of the work for the project is defined. (BP.1, BP2)
2) The feasibility of achieving the goals of the project with available resources and constraints is evaluated. (BP.2, BP.3, BP.5)
3) The activities and resources necessary to complete the work are sized and estimated. (BP.4, BP.5, BP.6, BP.7, BP.9)
⚡ 4) Interfaces within the project, and with other projects and organizational units, are identified and monitored. (BP.4, BP.9)
⚡ 5) Plans for the execution of the project are developed, implemented and maintained. (BP.4, BP.7, BP.9)
1 6) Progress of the project is monitored and reported. (BP.8, BP.10)
7) Adjustment is performed when project goals are not achieved. (BP.4, BP.5, BP.6, BP.7, BP.8, BP.9, BP.10)

1 On the first view, there is almost no change to the content. But there are some hidden changes.
I.e. **opposite** to the evolution in SWE and SYS the mapping of **outcomes to BP's** became **more complex** (i.e. outcome 1 & 6).

⚡ It looks like a **mistake in ASPICE PAM 4.0** that there is **no link between BP.7** and its natural **outcome 4**. In addition, there is n**o link between BP.8** and its natural **outcome 5**. It's unclear to me if this is intended or a mistake in the AS4.0 standard. Maybe a representative from AG13 can comment this.

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ASPICE PAM 3.1
Base Practices

MAN.3

BP1: Define the scope of work.

BP2: Define project life cycle.

BP3: Evaluate feasibility of the project.

BP4: Define, monitor and adjust project **activities**.

BP5: Define, monitor and **adjust** project estimates and resources.

BP6: Ensure required skills, knowledge, and experience.

BP7: Identify, monitor and **adjust** project interfaces and agreed commitments.

BP8: Define, monitor and **adjust** project schedule.

BP9: Ensure consistency.

BP10: Review and report progress of the project.

ASPICE PAM 4.0
Base Practices

BP1: Define the scope of work.

BP2: Define project life cycle.

BP3: Evaluate feasibility of the project.

BP4: Define and monitor **work packages**.

BP5: Define and monitor project estimates and resources.

BP6: Define and monitor required skills, knowledge, and experience.

BP7: Define and monitor project interfaces and agreed commitments.

BP8: Define and monitor project schedule.

BP9: **Ensure consistency.**

BP10: Review and report progress of the project.

1 Some changes are visible. For example the concept for "define & monitor" and "adjust" has changed. According to the ***VDA Guideline chapter 3.28.1.1*** define & monitor are about the setup and continuous re-evaluation of artefacts, while adjustment is a natural element of "ensuring consistency"!

It is also recommended to have a deeper look into the changes to all the notes in MAN.3 (e.g. BP.4, BP.5).

ASPICE PAM **3.1**

Outcomes

1) joint activities, as agreed between the customer and the supplier, are performed as needed; (BP.1, BP.2, BP.3, BP4)

2) all information, agreed upon for exchange, is communicated regularly between the supplier and customer; (BP.1, BP.2)

3) performance of the supplier is monitored against the agreements; (**BP.2, BP.3, BP.4**)

4) changes to the agreement, if needed, are negotiated between the customer and the supplier and documented in the agreement. (**BP.3, BP.4, BP.5**)

ASPICE PAM **4.0**

Outcomes

1) Joint activities, as agreed between the customer and the supplier, are performed. (BP.1, BP.2, BP.3, BP4)

2) All information, agreed upon for exchange, is communicated regularly between the customer and the supplier. (BP.1, BP.2)

(1) 3) Performance of the supplier is monitored against the agreements. (**BP.2, BP.3, BP.4, BP.5**)

(1) 4) Changes to the agreement, if needed, are negotiated between the customer and the supplier and documented in the agreement. (**BP.1**, BP.3, BP.4, BP.5)

(1) There is almost no change to ACQ.4 beside a different allocation of Outcome 3 & 4 to BP's.

ASPICE PAM 3.1

Base Practices

BP1: Agree on and maintain joint processes, joint interfaces, and information to be exchanged.

BP2: Exchange all agreed information.

BP3: Review technical development with the supplier.

BP4: Review progress of the supplier.

BP5: Act to correct deviations.

ASPICE PAM 4.0

Base Practices

①

BP1: Agree on and maintain joint activities, joint interfaces, and information to be exchanged.

BP2: Exchange all agreed information.

BP3: Review development work products with the supplier.

BP4: Review progress of the supplier.

BP5: Act to correct deviations.

① There is almost no change to ACQ.4. The rating rules changed slightly. The guideline introduced the term "contract-based supplier" and consequently removed the exception for open-source software (*VDA Guideline chapter 3.1.1.1*). Hence ACQ.4 focuses on software development on the base of customer requirements.

SUP.1

ASPICE PAM 3.1
Outcomes

1) A **strategy** for performing quality assurance is developed, implemented, and maintained. (BP.1)

2) Quality assurance is performed independently and objectively without conflicts of interest. (BP.1, BP.2, BP.3)

3) Non-conformances with relevant requirements are identified, recorded, communicated, tracked, resolved, and further prevented. (BP.2, BP.3, BP.4, BP.5)

4) conformance of work products, processes and activities with relevant requirements is verified, documented, and communicated to the relevant parties; (BP.2, BP.3, BP.4)

5) authority to escalate non-conformances to appropriate levels of management is established; (BP.6)

6) management ensures that escalated non-conformances are resolved. (BP.5, BP.6)

ASPICE PAM 4.0
Outcomes

1) Quality assurance is performed independently and objectively without conflicts of interest. (BP.1)

2) Criteria for the quality of work products and process performance are defined. (BP.2)

3) Conformance of work products and process performance with the defined criteria and targets is verified, documented and communicated to the relevant parties. (BP.3, BP.4, BP.5)

4) Non-conformances are tracked, resolved, and further prevented. (BP.3, BP.4, BP.5, BP.6)

5) Non-conformances are escalated to appropriate levels of management. (BP.5, BP.7)

6) Management ensures that escalated non-conformances are resolved. (BP.6, BP.7)

1   The term "**strategy**" disappeared for the support processes, same as for SWE and SYS. Anyhow, the new outcome 2 explicitly requires the criteria usually expected in the strategy. Hence the term "strategy" disappeared, but the content is still required and mandatory!

Example from the daily practice:
We usually expect a project handbook in MAN.3 even if it was never a defined work product (e.g. in AS3.1). Hence documented tactics on how to achieve the objectives of the support processes remains helpful.

ASPICE PAM 3.1

Base Practices

BP1: Develop a project quality assurance **strategy**.
BP2: Assure quality of work products.
BP3: Assure quality of process activities.
BP4: Summarize and communicate quality assurance activities and results.
BP5: Ensure resolution of non-conformances.
BP6: Implement an escalation mechanism.

ASPICE PAM 4.0

Base Practices

BP1: Ensure independence of quality assurance.
BP2: Define criteria for quality assurance.
BP3: Assure quality of work products.
BP4: Assure quality of process activities.
BP5: Summarize and communicate quality assurance activities and results.
BP6: Ensure resolution of non-conformances.
BP7: Escalate non-conformances.

SUP.1

(1) As a consequence of the removal of the term "**strategy**" from the outcome's as well as from the base practices, BP.1 is now splitted into two new BP's, in order to **ensure meaningful criteria** for quality assurance **and independency** are well considered.

ASPICE PAM 3.1

Outcomes

SUP.8

1) a configuration management **strategy** is developed; (BP.1, BP.3, BP.4)
2) all configuration items generated by a process or project are identified, (BP.2, BP.3, BP.6)
3) modifications and releases of the configuration items are controlled; (BP.3, BP.4, BP.5)
4) modifications and releases are made available to affected parties; (BP.3, BP.5, BP.9)
5) the status of the configuration items and modifications is recorded and reported; (BP.5, BP.7, BP.9)
6) the completeness and consistency of the baselines is ensured; (BP.3, BP.4, BP.8. BP.9)
7) storage of the configuration items is controlled. (BP.3, BP.4, BP.9)

ASPICE PAM 4.0

Outcomes

1) Selection criteria for configuration items are defined and applied. (BP.1)
2) Configuration item properties are defined. (BP.2)
3) Configuration management is established. (BP.3)
4) Modifications are controlled. (BP.3, BP.4)
5) Baselining is applied. (BP.5)
6) The status of the configuration items is recorded and reported. (BP.6)
7) The completeness and consistency of the baselines is ensured. (BP.7)
8) The availability of backup and recovery mechanisms is verified. (BP.8)
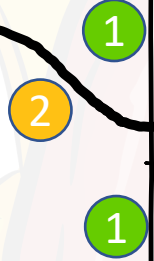
1 There is no fundamental evolution for the outcomes of SUP.8. But there is a more systematic correlation between outcomes and base practices.
I.e. in AS3.1 the BP's BP.3 and BP.6 did not have explicit outcomes. They were pointing to their natural work products through a list of outcomes. ASPICE4.0 provides a more direct allocation of BP.3 to outcome 3 and BP.5 to outcome 5.

2 Outcome 3 & 4 are merged into one single outcome 4.

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ASPICE PAM 3.1
Base Practices

BP1: Develop a configuration management **strategy**.
BP2: Identify configuration items.
BP3: Establish a configuration management system.
BP4: Establish branch management.
BP5: Control modifications and releases.
BP6: Establish baselines.
BP7: Report configuration status.
BP8: Verify the information about configured items.
BP9: Manage the storage of configuration items and baselines.

ASPICE PAM 4.0
Base Practices

BP1: Identify configuration items.
BP2: Define configuration item properties.
BP3: Establish configuration management.
BP4: Control modifications.
BP5: Establish baselines.
BP6: Summarize and communicate configuration status.
BP7: Ensure completeness and consistency.
BP8: Verify backup and recovery mechanisms availability.

1 As in other process areas, the term "**strategy**" disappeared. Still, it does not mean, it's purpose has disappeared.

2 More obvious, the BP.4 "branch management" has been removed. Be careful: looking into the ASPICE guideline, inappropriate branch and merge activities are explicitly considered in MAN.5 (*VDA Guideline chapter 3.29.2.1 Sources of risks*).

ASPICE PAM 3.1
Outcomes

1) a problem resolution management **strategy** is developed; (BP.1) ①

2) problems are recorded, uniquely identified and classified; (BP.2, BP.4)

3) problems are analyzed and assessed to identify an appropriate solution; (BP.4)

4) problem resolution is initiated; (BP.5, BP.6, BP.7)

5) problems are tracked to closure; (BP.8)

6) the status of problems and their trend are known. (BP.3, BP.8, BP.9)

ASPICE PAM 4.0
Outcomes

1) Problems are uniquely identified, recorded, and classified. (BP.1, BP2)

2) Problems are analyzed and assessed to determine an appropriate solution. (BP.2)

3) Problem resolution is initiated. (BP.3, BP.4, BP.5)

4) Problems are tracked to closure. (BP.1, BP.6)

5) The status of problems, including trends identified, are reported to stakeholders. (BP.6, BP.7)

① ASPICE4.0 does not explicitly mention the term "**strategy**" for the support processes anymore. It does not mean, it's purpose has disappeared. Aspects, such as criteria when problem identification starts or urgent resolution action require are still required according to the guideline (*VDA Guideline chapter 3.25.2.1 or 3.25.2.3*). Typically a project specific and documented approach is required.

ASPICE PAM 3.1
Base Practices

SUP.9

BP1: Develop a problem resolution management **strategy**.

BP2: Identify and record the problem.

BP3: Record the status of problems.

BP4: Diagnose the cause and determine the impact of the problem.

BP5: Authorize urgent resolution action.

BP6: Raise alert notifications.

BP7: Initiate problem resolution.

BP8: Track problems to closure.

BP9: Analyze problem trends.

ASPICE PAM 4.0
Base Practices

BP1: Identify and record the problem.

BP2: Determine the cause and the impact of the problem.

BP3: Authorize urgent resolution action.

BP4: Raise alert notifications.

BP5: Initiate problem resolution.

BP6: Track problems to closure.

BP7: Report the status of problem resolution activities.

(1) As in other process areas, the term "**strategy**" disappeared. Further, the base practice to identify problem trends has been removed. In both cases, its purposes have not disappeared at all. The problem trend analysis e.g. has been merged into AS4.0 SUP.9.BP7

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SUP.10

ASPICE PAM 3.1
Outcomes

1) a change request management **strategy** is developed; (BP.1)

2) requests for changes are recorded and identified; (BP.2)

3) dependencies and relationships to other change requests are identified; (BP.2, BP.4)

4) criteria for confirming implementation of change requests are defined; (BP.4)

5) requests for change are analyzed, and resource requirements are estimated; (BP.4)

6) changes are approved and prioritized on the basis of analysis results and availability of resources; (BP.5)

7) approved changes are implemented and tracked to closure; (BP.7, BP.8)

8) the status of all change requests is known; (BP.3, BP.6, BP.7)

9) bi-directional traceability is established between change requests and affected work products. (BP.4, BP.8)

ASPICE PAM 4.0
Outcomes

1) Requests for changes are recorded and identified. (BP.1)

2) Change requests are analyzed, dependencies and relationships to other change requests are identified, and the impact is estimated. (BP.2)

3) Change requests are approved before implementation and prioritized accordingly. (BP.3)

4) Bidirectional traceability is established between change requests and affected work products. (BP.4)

5) Implementation of change requests is confirmed. (BP.5)

6) Change requests are tracked to closure, and the status of change requests is communicated to affected parties. (BP.6)

(1) Again the term "strategy" disappeared. Aspects, such as life-cycle, interfaces or criteria for the analysis of change requests (also relevant for SUP.1) are still required according to the guideline (*VDA Guideline chapter 3.26.2.2*).. Typically a project specific and documented approach is required.

(2) Outcome 3, 4 & 5 are merged into one single outcome 2.

ASPICE PAM 3.1
Base Practices

BP1: Develop a change request management **strategy**.

BP2: Identify and record the change requests.

BP3: Record the status of change requests.

BP4: Analyze and assess change requests.

BP5: Approve change requests before implementation.

BP6: Review the implementation of change requests.

BP7: Track change requests to closure.

BP8: Establish bidirectional traceability.

ASPICE PAM 4.0
Base Practices

BP1: Identify and record the change requests.

BP2: Analyze and assess change requests.

BP3: Approve change requests before implementation.

BP4: Establish bidirectional traceability.

BP5: Confirm the implementation of change requests.

BP6: Track change requests to closure.

SUP.10

1 In AS 3.1 the status and the progress of the change request was refined in 3 base practices. In the spirit of SWE and SYS there is only one base practice left to ensure the consistency and integrity of a change to ensure the implementation can be confirmed by the process.

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Conclusion:

- Mistake found for the mapping of outcomes to BP's in **MAN.3**

- The evolution of the support processes is much less ambiguous and less consequent than for the engineering processes, i.e. with regards to the unilateral **mapping of base practices to outcomes**.

- No more use of the term "strategy". As in SWE and SYS the expectations didn't really change.

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